ICT Engineering

Semester Process Report

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# Group policy

The members of the groups decided to create and respect all the policy rules:

1. Everyone agrees to come to group meetings.
2. The time and place of group meetings shall be agreed upon unanimously within our group.
3. We will have regularly meetings on Monday, Wednesday, and Friday mornings.
4. The meetings should have its own task with a specific deadline.
5. Make sure that when someone misses a group meeting, that person will contact the group as soon as possible.
6. Everybody will work on group’s tasks collaboratively.
7. Everybody will work on what it is allotted to do, done, and respecting deadlines.
8. Regarding sick issues, the person which is not attending meetings, is responsible for notifying group members, being able afterwards to catch up the work performed during absence.
9. If somebody doesn’t work on the task repeatedly, it will be prevented inside the group, support the penalty decided by group members.
10. Each member will be treated with respect and consideration.
11. Everybody will do everything in their capabilities to help group members understand each concept and problem.
12. If I do not understand a concept or solution, I will not hesitate to ask my group members for help.
13. I will communicate with my group members about any concerns I have regarding our group work.
14. I will be an active member of this group in all aspects. I will not take answers as fact, but instead confirm results.

# SWOT analysis

## Andreea Buturca

**Strengths:** Creative, good communication skills in team, enthusiastic, dynamic, committed to the success, experience with working in teams, project planning, group presentations, keeping portfolio.

**Weakness:** No experience with programming and databases, I have a strong, compulsive need to do things quickly and remove them from my "to do" list, and sometimes the quality of my work suffers as a result.

**Opportunities:** Improve English and communication skills, learn more about programming, improving skills by working in a group with motivated members from multicultural countries.

**Threats:** Bad weather and car problems, sickness.

## Karolina Beliharova

**Strengths:** Positive mind, courage to overcome obstacles, challenging person, team player, open-minded, experience with working in teams.

**Weakness:** Sometimes indecisive, no experience with projects and databases.

**Opportunities:** Improve my programming skills and databases knowledge, learn more about team-work and different cultures background, improve my skills in English language and communication skills.

**Threats:** Bad weather, illness.

## Marek Lowy

**Strengths:** Good communication skills, programming experiences, I can easily handle stress situation, quick-thinker, cooperative, highly-motivated.

**Weakness:** Forgetful, nervous, no experience with databases, sometimes focus too much on one think.

**Opportunities:** Improve my skills in English language and communication skills, learn more about team-work and other cultures, personal development.

**Threats:** Bad weather, illness.

## Martin Janosik

**Strengths:** Knowledge in all programming courses, willing to help others, good logic thinking, decisiveness.

**Weakness:** Problems to be communicative, late arrivals, I focus too much on details to have my work perfect.

**Opportunities:** Learn more about the group work, teach other group‘s members java, improve my English and communication skills, and learn more about team-work.

**Threats:** Problem with car, bad weather, illness.

## Team SWOT:

**Strengths:**

We are willing to help each other.

We have experience with working in group.

We are team players so we can motivate and inspire each other.

We are committed to hard working.

We divide the work, agree on schedule that fits to everybody in our group and we can work faster.

**Weakness:**

We have too much specialists.

Coming late.

We are not that good in splitting tasks.

Planning might not be our strongest ability.

**Opportunities:**

To improve English and communication skills.

To meet people with different cultures.

To improve our team skills.

To improve programming skills and knowledge about databases.

**Threats:**

Bad weather.

Some personal conflict can appear between the members of the same group.

Somebody could sabotage the project work.

# Group roles

## Andreea Buturca

As a coordinator, my job was to plan group meetings. Before 16th of November we met after courses in our class and after 16th of November we met in our class at 10 in the morning every Monday, Wednesday and Friday. Usually we stayed there until late afternoon. I made sure that the group stayed on track and focused work around the learning task. I made sure that every voice is hear at meetings.

As an implementer, I organized the work and put the team’s ideas and plans into action. Working practical and efficient, I collaborate on each team task, so they could be delivered on time, respecting the deadlines.

## Karolina Beliharova

As a recorder, I was responsible to write the group’s ideas down and summary of the group work at the end. I put the ideas of my mates together and compared them. I made sure that each member of the team recorded work or data. I listened to others and gave them constructive feedback if they needed it. I served as group memory.

## Marek Lowy

As a presenter, I was responsible to present my group’s response. I wanted to be sure that communication in my group is easy-going and all tasks, solutions and strategies are discussed. I made summaries during every discussion for other members to help them made choice how they should do their work. I spoke for the group when the group is called on to answer a question or present to the class. I was responsible to talk with the teacher when there was some problem.

## Martin Janosik

As a checker, I was looking for spelling mistakes when we had to send an assignment. I made sure all group members know what to do and helped the group members who were unsure. I made all work and discussion is of the highest standard and work met success criteria. I decided with my team how many hours we need to work for every hand-in and I made a schedule that fits everybody.

As a monitor, I was responsible for making sure that everyone in the group understood correctly to the group’s task, solution and strategy. I collected supplies for the team. I ensured that everyone was helped when has a question. I was glad to help my group mates and in the end everyone understood the task.

# Considerations

## Andreea Buturca

I started working on this project, feeling that understanding someone else’s code it could be the hardest thing for me, as I didn’t have any prior experience in programming. I felt that it would be difficult to reach my colleagues’ programming level, but I was very motivated to work hard, to support the team and throughout the project I felt very responsible for every task I needed to perform.

For me working in a team with multicultural members didn’t seem hard in thebeginning, as I have big experience, from work and from my previous higher education, to work in diverse teams, to accomplish different goals with specific deadlines. So, I started, the project feeling confident in my ability to work in a multicultural environment. But things, started to change during the project. In my opinion there were some communication problems in the team. During our project meetings, some of the matters were discussed in Slovak, English being used only at my pressing request or when something regarding my tasks was discussed. This made me feel that I am losing essential parts of the project development. All things considered it was impossible for me to be 100% involved in this project as I intended at the beginning.

We started the project making the requirements, use case description, and activity diagrams, which were mandatory for our hands in. In the beginning, they weren’t so well structured, because we needed a better overview of what should the system include. Also, being a person who processes information actively, I understood information better after every matter was discussed, ideas were written down, and after I started to apply them. As a global learner, I needed the big picture before I could master details. Each time before I began a new section of the project, I had to skim through the entire interview to get a better overview. I also preferred information being presented visual and as **a visual learner**, I concentrate more on graphical information. That’s why, together with Martin we drew on paper the GUI interface and that helped a lot to understand better what the system must consists of. I accepted when Martin suggested building the GUI in JavaFX, instead of Java swing, because we could have certain guidance from him, and could make our job easier. I continued with some parts of functionality of GUI, coordinated by Martin, who is an experienced programmer, good to work with and to learn from. I consider that our group was leaded by him with a good structure and specific tasks and deadlines. He was a great help in debugging, as well, when we had troubles.

In addition, during the project, I perceived information relying too much on sensing, tending to prefer what is familiar, and concentrate on facts I knew instead of being all the time innovative. **Being a sensory learner, i**f some parts of the project seemed difficult to accomplish, I tried to follow a safe (known) and fast path. One example could be the part of the project where I preferred to implement lists instead of tables, to display data on the screen view because it was much easier.

Moreover, during the project, I experienced some problems with GIT hub, our tool for merging and combining codes. Because of that, sometimes during weekends I’ve got stuck, having merging conflicts, and not being able to synchronise my work with the main project.

We didn’t spend a lot of time together doing the project because some needed a shorter period of time to work on the same amount than others, on the other hand, some are B person, others A person – me for example. As seen on Git punch card, the hours that were spent on the project differed a lot from A to B person, working hours started from 10 am, and lasted until 3 am in the morning. And I had to respect that each person is productive in different moments of the day. Moreover, in the last week, I met at school only with Karolina, because Martin and Marek left home. It was difficult to stay in contact with them, we had a lot of dead time, waiting for some group decision to be made, especially when we discovered some bugs in the system, I didn’t know if we should leave it like that, or another member could fix it. The communication and the interest reached a low level. I am aware that if we could spend more time together, doing the project, and if during the meetings, only English would be spoken, it would be a great advantage for me. And I think this thing can be improved on the next semester project.

## Karolina Beliharova

During the semester I was working with Andreea, we have been programming partners since the beginning of the semester. We got used to each other and I can say I like working with her, of course we had some problems but I am open-minded that means I do not have a problem to accept criticism. We always talked about the problem and then figured out it together. Martin and Marek sat in front of us and because both of them had some programming experiences from high school, they were able to help us during the classes when we were completely lost. We worked together on some tasks so we found out how to cooperate together and decided to be group for SEP.

This project was kind of challenging for me. I learnt how to work in team at my high school, but it was easier and different because no one had the motivation to work as hard as us now here. I have to learn how to work with people with different cultures background. Working with Marek and Martin was not so big problem, because our cultures are similar but on the other hand we had to respect Andreea that sometimes was not observed.

Martin was something like a leader of group because his programming skills are on higher level than others. It was our big advantage because he exactly knew what to do and he could do it really quickly. He was able to correct every problem that we met with code. In the beginning we were thinking about that I and Andreea would work on documentation and guys would work on code. During the project, Andreea had interesting ideas how to make GUI so she worked on code with guys and I did documentation but in the end she was able to help me. I think this work everyone hates the most. It sounds easy but taking notes and documentation is actually harder than it looks like. I would like to say I am glad that in our group were two girls and two boys. I got experience how to work with both genders and I hope it would help me in the future.

We agreed on meetings every Monday, Wednesday and Friday at 10. It was rewarding for us because we had some days off when we could relax from the project but actually I think everyone was working almost every day because we wanted to finish as soon as possible and had the project on high level. Some days we had team buildings, we spent time together without codes and tried to know each other. We enjoyed entertainment so we became really good friends and working together was then easier and funnier.

In the last week of the project period there was complication with communication in our group because guys had some plans so they went home earlier and I and Andreea stayed there until the project was not done. Firstly I did not have problem with this because Martin did all his job well and he made the hardest part of the program. But suddenly we met many problems this week and we had to do a lot of changes. Still I think for the next project I would appreciate that everyone stays and leaves when the project will be uploaded.

During the project I received a lot of new knowledge and experiences and I think in future it will help me. I learnt more about team work and met new cultures. I was satisfied with my group and how we handled the project.

## Marek Lowy

I have worked with Andreea, Karolina and Martin since the beginning of the semester. We have got used to working together, at least in my opinion. We have found out how to work together and communicate. That was one of the reasons why I chose them for semester project too. In next few paragraphs I will write my thoughts about the project, working in team, solving difficult tasks etc.

This was the first time I’ve been working on this kind of project. Even though I learned how to work in team at high school, I found out that it’s still not that easy. We’ve been meeting every two days in a week and I quickly realized that it’s quite hard to split work between four people and keep track of what they are working on at the same time. At the beginning we didn’t have much to do so we split roles. Karolina was working on the documentation, Martin was designing GUI and me with Andreea were working on all classes in model. But after project moved to later phases, it got a bit chaotic. Sometimes one member didn’t know what to do until next meeting or two members worked on the same thing. That was when I realized that communication in the team is not as easy as it seems.

During the whole project we encountered experience problems several times. I and Martin have some programming experiences, but girls don’t. It was not that easy thinking together about the whole project. We had a plan right after being introduced to the task and we didn’t think it’s hard, at least it didn’t seem to be. I admit our first plans and vision have been quite more than required and we quickly let of them when we saw the look at the girls faces or realized how much of a work it would be. We learned that we have to explain our thoughts and sometimes we had to find good arguments to prove us right. We discussed and decided to use JavaFX GUI, because it was easier to make and looked much nicer. At the beginning I was scared that girls would find it hard to understand, but I was wrong. They caught up very fast and started working with it without any major problems. In the end I didn’t notice any problems and differences as I thought about first.

The coding wasn’t hard for me. As I mentioned I have programmed before so I can think in a programmer way. I did what I was told to do and had no problems. If I encountered something I did not know I just opened google and voila. But after we made model and started on doing methods I quickly learned that having something around 15 classes in head and thinking about dataflow between the in the same time isn’t that easy.

Next the language made some issues too. Before we decided to work together we made rule to talk only in English. But since we are two Slovaks and one Czech in the group, sometimes we slipped away. Never on important things though. But I found it much easier to brainstorm with Martin in Slovak and after that to conclude out mishmash in English to the rest of the group. I guess have to work on controlling that, because even though it’s easier way I still find it mean to others.

The last thing I felt was difference in dedication to work. There were days when one of the group members wasn’t having a “productive day”, often me. Our schedule was meeting at school every Monday, Wednesday and Friday and I am that kind of person that wakes up feeling very productive at home and not at school someday or feeling tired at home but full of energy outside the other day. And that had sometimes conflicts with our schedule. I never saw that as a problem but this project showed me that I should really learn how to control that part of me.

In conclusion, this project showed me my weak sides in teamwork and communication on which I have to work. Also I learned doing this just from the interview. It is a great way to learn since I had free hand, and was forced to learn new stuff if I wanted to use it.

## Martin Janosik

I decided to work with Marek, Andreea and Karolina because we have been working together since beginning of semester. I had no problems with cooperating with them during our project so I think it was good decision. The task we were given was simple and straight. I like idea of giving students interview since this is much closer to real life work than predefined model that has to be implemented. In interview we had specified some requirements, but we had free hand at the same time.

We planned our meetings for every two days since we came to conclusion that mostly we are more productive at home. I usually split work and told other members what they should do at home. We primarily used GitHub as our share point since it allowed us to code at the same time, share and merge code right away, and see all the changes other members did. On our meeting we discussed questions and worked on the code together. We have worked on the documentation for the project while coding, because we have found it more time efficient.

At the beginning I was designing GUI while other members worked on the model. This was the point where I encountered first complications. The interview didn’t specify how the model should look like and every team member had different idea. We had to discuss, but it didn’t take long to find reasonable solution. I found out that communication in the team is really important. It the beginning I was a bit worried. I have some professional programming experience and I was scared that other team members wouldn’t understand my code, but I was wrong. The understood quickly and did their work very well.

Language wasn’t problem at all. But it’s true that sometimes I realized that I argued with mark about the code in Slovak. It wasn’t big problem since he summarized our conclusion to the group afterwards. I even found it more efficient that way.

At the testing phase we found some bugs and things which didn’t work. I have to admit some were pretty hard to find and solve. Most often the reason was that other member implemented some methods and I used them. It seems easy but understanding somebody’s code is not easiest thing to do. The logic in the code is simple but the intention isn’t. Fortunately, communication solved most of these problems for us. We understood each other and then quickly solved the problem. Also in the half of the project we have decided not to use MyDate class we have made during our SDJ lessons, but instead to use built in Java Date and LocalDate. The reason was simple; those were working better. But switching classes while in the middle of project was tricky. We had to redo a lot of code to work properly.

To sum it all up, I gained a lot of experiences while doing this project. It helped me to develop my communication skills, teamwork and cooperation. I liked the way task was presented and possibility to add things to the project. It made me feel more motivated, and I am always more productive while having fun and enjoying my project.

# Target audience

Before we started the reports, we took into consideration the target audience. The project report and appendices have an expert audience and it was used a formal language, with specialized and technical terminology, except for the GUI User guide, where it was used an informal language, so each employee could understand the indications of the system that was implemented. The process report uses an informal language as we expressed our personal reflections and considerations.

# List of tasks

## Andreea Buturca

* Activity Diagrams
* Use Case Descriptions
* Requirements
* Use Case Diagram
* Introduction
* Design class diagram breakdown
* Testing
* User guide to the system
* Graphical user interface design – phase 1.
* GUI functionality: 1. Reservation controller: loadCustomerList, loadPassenggerList, addCustomer, addpassenger, removePassenger. 2. Chauffeur controller: addchauffeur, deleteChauffeur, loadlist
* Chauffeur Class, Customer, Passenger, toStrings in all classes.
* Group policy

## Karolina Beliharova

* Activity Diagrams
* Use Case Descriptions
* Requirements
* Project Report
* Process Report
* Use Case Diagram

## Marek Lowy

* Coding classes and methods in model
* BusController
* Consideration
* Use Case Diagram
* Activity Diagrams
* Use Case Descriptions
* Sequence Diagram
* JavaDoc

## Martin Janosik

* Graphical user interface design and functionality
* Controllers, Trip and Reservation controllers, main controller
* Connection between controllers and GUI
* Supervising work on program, guiding
* Basic models design
* Work planning, dividing, giving tasks to members
* Datahander – connection between controllers and models, data reading and storing
* Validation methods
* Main class
* Alert windows
* Coding classes and methods in models
* Code cleaning and sorting

# Supervisor meetings

The meetings with the supervisors were necessary at the beginning because we did not understand enough what exactly we need to prepare for the assignments. We met them weekly to clarify what are the expectations of product owner and to have explained some of the wishes from the list.

In the period of working for the process and project report, we needed to meet the supervisors again. We had a lot of questions because only one member had an experience with project planning and the rest had not the experience with the reports before.

At every meeting, the supervisors were willing to help us and give good advices for every task.

**23.11.2016**

The supervisor guide us on what should we change in the second. He helped us to develop a better overview of the system and gave us pieces of advice about requirements, the class diagram, GUI development, JavaFX.

**30. 11. 2016**

Consultation of requirements, use case diagram and activity diagram. We were asked to specify Trip’s requirements. We received advice how to improve our activity diagram and use case description.

**9. 12. 2016**

Consultation of class diagram, functionality of GUI, to improve the prices for extra services according to passenger’s age, consultation of use case diagram - to add a new use case with the list of tours sorted by date, questions about Javadoc, and bin file.

**15.12. 2016**

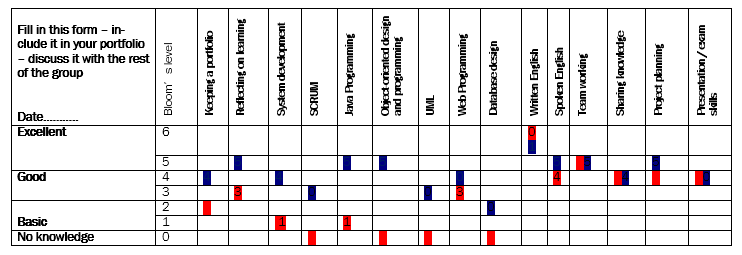
Consultation of group and Belbin roles and individual considerations. We were asked to write about writing styles. We received advice how to improve our project report specially introduction and abstract. We obtained information about format of our documentation.

# Bloom’s forms

## C:\Users\Karolina\Desktop\Andreea.PNGAndreea Buturca

## C:\Users\Karolina\Desktop\Karolina.PNGKarolina Beliharova

## Marek Lowy



## C:\Users\Karolina\Desktop\Výstřižek.PNGMartin Janosik